

REMARKS

The claims remaining in the present application are Claims 1-29. The Examiner is thanked for performing a thorough search. No claims have been amended.

OBJECTIONS

SPECIFICATION

In paragraph 1, the Office Action objected to the specification. The specification has been amended. Therefore, Applicant believes that this objection has been addressed.

CLAIM REJECTIONS

35 U.S.C. §103

Claims 1-5, 9-10, 13-14, 24 and 27-28

In paragraph 3 of the Office Action, Claims 1-5, 9-10, 13-14, 24 and 27-28 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No 6,175,351 by Matsuura et al. (referred to hereinafter as "Matsuura") in view of Official Notice. Applicant respectfully submits that embodiments of the present invention are neither taught nor suggested by Matsuura nor Official Notice, alone or in combination.

Claim 1 recites,

A method of transmitting digital video over an analog interface comprising:

accessing digital video data having a number of bits per color per pixel; encoding said digital video data such that analog compatibility standards are preserved and said bits per color per pixel are encoded to an amplitude level; and

transmitting said encoded digital video data over an analog interface.

Applicant respectfully submits that Matsuura does not teach or suggest "accessing digital video data having a number of bits per color per pixel; encoding said digital video data such that analog compatibility standards are preserved and said bits per color per pixel are encoded to an amplitude level; and transmitting said

encoded digital video data over an analog interface," (emphasis added) as recited by Claim 1.

Matsuura teaches an image display apparatus, such as a liquid crystal display (LCD), and a method for driving that image display apparatus. The display device has a plurality of pixels arranged in a matrix that are driven by a field sequential scanning system. A display signal is supplied to each of the pixels. A scanning signal is also supplied to each of the pixels by scanning circuitry. The scanning circuitry allows the pixels to receive a charge that corresponds to the display signal for a predetermined write time. The write time is modulated based on the scanning performed by the scanning circuitry.

The Office Action asserts that Matsuura teaches "accessing digital video data having a number of bits per color per pixel," at Col. 12 lines 20-33. Col. 12 lines 20-33 state, "...a D/A converter 50 composed of a plurality of D/A conversion elements for converting the temporally expanded or compressed digital data signals into analog data signals for display..." (emphasis added). Note that Col. 12 lines 20-33 are silent with respect to "a number of bits per color per pixel" therefore Col. 12 lines 20-33 cannot teach or suggest "accessing digital video data having a number of bits per color per pixel".

Applicant respectfully agrees with the statement on the third paragraph of page 3 of the Office Action that Matsuura does not teach "said bits per color per pixel are encoded to an amplitude level." Applicant respectfully disagrees with the Office Action's assertion that "it would be obvious to one of ordinary skill in the art to encode said bits to an amplitude level" because Matsuura teaches away from "said bits per color per pixel are encoded to an amplitude level."

For example, the Office Action asserts that Matsuura teaches "encoding said digital video data such that analog compatibility standards are preserved" (emphasis added) at Col. 12 lines 20-33, which has already been quoted above. It appears to Applicant that the Office Action is asserting that Matsuura's "analog data

signals for display" (Col. 12 line 33) teaches Claim 1's encoded digital video data. At Col. 15 lines 16-24 Matsuura states with respect to his "analog data signals for display"

Thus, according to the present invention, the following improvement has been made so as to reduce the voltage of the analog signals at the pixel display portion 100. That is the liquid crystal is driven by an alternating voltage signal so as to prevent the degradation of the liquid crystal (see FIG. 4A). In this operation, as shown in FIG. 4B, a common electric source is alternately driven so as to prevent the amplitude of the voltage signals applied to the liquid crystal from increasing.

Since, among other things, Matsuura requires the voltage of his "analog data signals for display" to be reduced and/or teaches preventing the amplitude from increasing, Matsuura teaches away from "said bits per color pixel are encoded to an amplitude level."

Since Matsuura teaches away from "said bits per color pixel are encoded to an amplitude level" Matsuura cannot teach "encoding said digital video data such that analog compatibility standards are preserved and said bits per color per pixel are encoded to an amplitude level." Further, since Matsuura cannot teach "encoding said digital video data" Matsuura cannot teach "transmitting said encoded digital video data..."

Matsuura cannot be combined with the Office Action's Official Notice (3rd paragraph on page 3 of the Office Action) for several reasons. For example, as already stated herein Matsuura teaches away from "said bits per color pixel are encoded to an amplitude level." However, there are many other reasons that a 103 rejection based on the combination of Matsuura and Official Notice is not proper. One, there has been a long felt need. For example, the most recent reference that the Office Action was able to cite is 10 years old and even it teaches away from "said bits per color pixel are encoded to an amplitude level." Second, others have failed to recognize the problem. Third, others have failed to solve the problem. Fourth, impermissible hindsight was used for the Official Notice (3rd paragraph on page 3 of the Office Action). Fifth, there is a tremendous amount of competition for

digital video display type devices. A company that provides digital video displays with the best performance has a significant competitive edge.

Therefore, Claim 1 should be patentable over Matsuura and the Official Notice (3rd paragraph on page 3 of the Office Action) because neither Matsuura nor the Official Notice, alone or in combination, teach or suggest, "accessing digital video data having a number of bits per color per pixel; encoding said digital video data such that analog compatibility standards are preserved and said bits per color per pixel are encoded to an amplitude level; and transmitting said encoded digital video data over an analog interface," (emphasis added) as recited by Claim 1. Independent Claims 10 and 24 should be patentable for similar reasons that Claim 1 should be patentable.

Claims 2-9 depend on Claim 1. Claims 11-23 depend on Claim 10. Claims 25-29 depend on Claim 24. These dependent claims include all of the limitations of their respective independent claims. Further, these dependent claims include additional limitations which further make them patentable. Therefore, these dependent claims should be patentable for at least the reasons that their respective independent claims should be patentable.

Claims 6-7, 16-20 and 22-23

Claims 6-7, 16-20 and 22-23 are rejected under 35 U.S.C. §103(a) as being unpatentable over Matsuura in view of U.S. Patent No. 6,614,424 by Kim et al. (referred to hereinafter as "Kim"). Applicants respectfully submit that embodiments of the present invention are neither taught nor suggested by Matsuura or Kim, alone or in combination.

As already stated, Claim 1 is patentable over Matsuura because Matsuura fails to teach or suggest "accessing digital video data having a number of bits per color per pixel; encoding said digital video data such that analog compatibility standards are preserved and said bits per color per pixel are encoded to an amplitude level; and transmitting said encoded digital video data over an analog

interface," (emphasis added). Independent Claims 10 and 17 should be patentable over Matsuura for similar reasons.

Kim does not remedy the deficiency in Matsuura in that Kim does not teach, among other things, "accessing digital video data having a number of bits per color per pixel; encoding said digital video data such that analog compatibility standards are preserved and said bits per color per pixel are encoded to an amplitude level; and transmitting said encoded digital video data over an analog interface," (emphasis added) as recited by Claim 1. In fact, the Office Action does not even assert that Kim teaches the limitations recited by independent Claims 1 and 10. Further, the Office Action does not assert that Kim teaches the limitations "accessing a plurality of bits per color per pixel of digital video data; encoding said bits per color pixel to one of a plurality of available amplitude levels...transmitting..." (emphasis added) as recited by independent Claim 17.

Claims 6-7 depend on Claim 1. Claim 16 depends on Claim 10. Claims 20, 22 and 23 depend on Claim 17. These dependent claims include all of the limitations of their respective independent claims. Further, these dependent claims include additional limitations which further make them patentable. Therefore, these dependent claims should be patentable for at least the reasons that their respective independent claims should be patentable.

Office Action does not assert that Kim teaches

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CONCLUSION

In light of the above listed amendments and remarks, reconsideration of the rejected claims is requested. Based on the arguments and amendments presented above, it is respectfully submitted that Claims 1-29 overcome the rejections of record. For reasons discussed herein, Applicant respectfully requests that Claims 1-29 be considered by the Examiner. Therefore, allowance of Claims 1-29 is respectfully solicited.

Should the Examiner have a question regarding the instant amendment and response, the Applicant invites the Examiner to contact the Applicant's undersigned representative at the below listed telephone number.

Respectfully submitted,

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